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EDUCATION AND CULTURE COMMITTEE

Inquiry into attainment of school pupils with a sensory impairment

The Scottish Sensory Centre Response:¹ Impairment of vision and blindness in pupils.

Overview

One of the major problems facing professionals involved in the education of children and young people who are visually impaired is the employment/further education rates of children leaving education services. Research shows that there is a high unemployment rate (in the United Kingdom) of people with visual impairment. However, low employment should not be automatically equated with levels of educational attainment. If pupils with visual impairment and with no other additional support needs are achieving only slightly less in attainment than their sighted peers but have a higher unemployment rate, what could be causing the disparity between the two? This response suggests that part of the problem is the delivery (or not) of the mobility and independence curriculum. It is not visual impairment *per se* that causes the difficulty, it is the lack of mobility and independent living skills. The two are separate issues. What could be a possible solution to ensure VI children are able to access a curriculum that includes independence and daily living skills within a mainstream school? We will suggest that for some pupils, especially those who should be accessing independent living skills lessons, it may be appropriate to focus less on academic attainment and concentrate mainly, or even wholly, on developing independent living skills. If this suggestion is accepted in schools then the training of independent living skills must be supported by appropriately trained habilitation workers, employed by local education authorities, and supported by a collaborative professional framework. This model of delivery ensures that all aspects of daily living needs are catered for not only at school but within the community as well.

¹ This response is an amalgamation of two published papers on the attainment of children with visual impairment.

Ravenscroft, J. (2013). High Attainment Low Employment: The How and Why Educational Professionals are Failing Children with Visual Impairment *The International Journal of Learning*, Volume 18, Issue 12, pp.135-144.

Ravenscroft, J. (2015). *Visual Impairment and Mainstream Education: Beyond mere awareness raising*. In Special Education (Eds) Lindsay Peer and Gavin Reid. Second edition P 196 -211. Sage

Background

The world-wide drive towards 'inclusive' education has meant the number of children with a visual impairment and other disabilities attending regular mainstream classes has increased. This, for example, is true for Australia, where there are a greater number of students that have a recognised disability who attend regular classes than are in segregated settings (*Australian Productivity Commission*, 2008; Dempsey, 2008), and also true for Scotland (*Scottish Government, Pupils in Scotland*, 2006) where the Scottish Executive's *Standards in Scotland's Schools Act 2000*, advocates the presumption of mainstreaming except in exceptional circumstances. In England, we see 57% of primary aged children and 47% of secondary aged children with visual impairments attend local mainstream schools and approximately 6% of children with a visual impairment attend a mainstream school with an associated specialist resource base (Keil and Clunies-Ross, 2003). Interestingly enough the same research also showed only 5% of children attended a special school for children with visual impairment in Great Britain in 2002 (compared with 22% in 1988, and 10% in 1995). Recent figures appear to suggest that there are around 25,305 children and young people with visual impairment in England, Scotland and Wales which is an increase in previous years (Morris and Smith, 2008).

Attainment

A question that is often asked, not only by parents but by all concerned with the education of children with visual impairments, is how well are these children doing at school? In answering this question, part of the response inevitably comes round to discussing the pupils' attainment rates. Looking at research by Chanfreau and Cebulla (2010) who examined the attainment levels of children who obtained GCSE qualifications in 2007 in England and Wales (the main qualification taken by children aged 14 to 16 years old), we see some very fascinating results. Not unsurprisingly, they report those children without any special educational needs are the most successful in obtaining a pass mark in the qualifications entered. However, what is interesting is the difference in attainment between pupils with visual impairment without any special educational needs and those with visual impairment and additional (or plus as the authors describe it) educational needs. The research shows the attainment rate for those pupils who have a visual impairment without any other educational support needs are close to those pupils who have no special educational needs at all. 64% of the 548,469 children who had no special educational needs obtained 5 or more GCSE A* - C passes. Whereas 54% of the 443 children who were visually impaired with no additional support needs obtained the same number of passes. The authors go on to claim that if a pupil had visual impairment and additional support needs this figure significantly drops to (15% of 484 pupils with visual impairment and special educational needs), (Chanfreau & Cebulla, 2010).

In conjunction with the increase in children with special educational needs in mainstream schools and the success of visually impaired children without any additional special educational needs in obtaining mainstream qualifications, there has been a development in the way specialist and mainstream teachers work and talk about models of service

provision. It is currently recognised and accepted that collaboration is a vital concept, though what it means is not so easy to define, and as such different names are often used. For example, we see collaborative working often goes under names like 'inter-agency working', 'integration', 'multi-agency working'. This has led to what some have described as a terminological quagmire (Leathard, 2003), with terms often being used interchangeably (Hughes, 2006). The basic intention may be "...simply learning and working together" (Leathard, 2003, p4). If we accept that support is now generally offered through a multi-agency framework through a collaborative working approach (Gray, 2008), the objective, as Atkinson, Jones and Lemont (2007) suggest, is the co-ordination of services will avoid duplication of effort and provide children and families with better outcomes. These outcomes include access to services not previously available to children and families, improved educational attainment for children within mainstream schools and a reduced need for more specialist services. Adopting a multi-agency approach to service provision for children with visual impairment who are attending mainstream schools can lead to improved outcomes for children and families with visual impairment, as well as to the provision of significant benefits for those staff and services that are part of a multi-agency framework. Within this framework one of the main overriding aims for children with special educational needs has to be for the child to be considered an active citizen of the country they reside in, and one aspect of being considered an active citizen is for a person to have meaningful employment.

Employment

This aim, the goal of meaningful employment, has now possibly been misinterpreted by many educational professionals and has led some educators to focus too much on the educational attainment of children with visual impairment in order that they match their sighted peers. This means for children with visual impairment that they must be seen as academically equivalent. This concentrated vigour on matched or near attainment of sighted and visually impaired students has therefore led to some professionals missing the over-arching aim of ensuring all children become truly active and responsible citizens.

When we examine the employment figures for people with visual impairment it shows a high unemployment rate (see Meager and Carta, 2008; Douglas, Corcoran, and Pavey, 2006; Douglas, Pavey, Clements and Corcoran, 2009). We know in the United Kingdom for example, over two thirds (70.7%) of the general population of working age (16-64 years of age) are employed (*Office of National Statistics*, 2011). However, Douglas and his fellow co-workers have reported the employment rate of people who are registered blind or partially sighted is as low as 33% (Douglas *et al*, 2009). If we drill down further into some of the statistics we see the employment rate of young adults aged between 18-29, who are registered as visually impaired, as only being 22%. Further research from the *Network 1000* study showed, when asking 331 participants who were of a working age but were not employed, a standard question about likelihood of obtaining paid work in the next year, the authors found that 66% (N=218) of participants stated they believed they were 'very unlikely' to obtain paid work in the next year and, more alarmingly, this figure rises to 90%

(N = 298) for those who reported 'unlikely' to obtain paid work in the next year Douglas *et al* (2009).

A Sophisticated Deficit Model

So what appears to be happening for young adults with visual impairment and with no other additional support needs is they are achieving only slightly less in attainment than their sighted peers but have a significantly higher unemployment rate. We need, therefore, to ask what could be causing the disparity between the employment rates of sighted and visually impaired young adults. The answer to this question is surely a complex one, where attitudes of employers will have a part to play. However, an argument can also be made that part of this complex problem is the delivery (or not) of the mobility and independence curriculum. If single disability visually impaired children are achieving near standard attainment rates, but are leaving school with very little independent living skills, then although their attainment levels may allow the student to be called for an interview, the employer may soon recognise the poor independence and social skills that are presented. As a result, the student is less likely to be successful in obtaining employment. It is important to emphasise that it is not the visual impairment *per se* that causes the difficulty; it is the lack of mobility and independent living skills. The two are separate issues and should be seen as such and not mistakenly combined together.

The argument that is being put forward is that, for some educational professionals, they are still adhering to a type of deficit model, only more sophisticatedly, in their approach in educating children with visual impairment. As we know, the deficit model is based around the belief that "a characteristic or deficit is inherent within an individual and is likely to have a biological rather than social cause" (Riddell, 1996, p84), and this has led to some believing an over emphasis on academic attainment should be made because of the visual deficit which the student possess. The main tenet, therefore, is that the impairment causes the continuing inability of the person to function compared to the 'norm'. Where this sophisticated deficit approach differs to the traditional deficit model is in the belief that some educational professionals have about the nature of visual impairment. Here the deficit manifests itself by educational professionals determining a more focused and structured adult controlled learning environment for visually impaired pupils, focusing on the weighted expectation of attainment and not allowing an informed discussion with the child about the direction and nature of education necessary for them to become an active citizen in the community to which they belong.

This view supports the argument made by Davis (2011) and others (see Humphrey and Lewis, 2008; MacNaughton, Hughes and Smith, 2007) to give children that have been identified as having special needs (or 'additional support' as it is termed in Scotland, *Scottish Government*, 2004) a voice in terms of their education. The sophisticated deficit model suggests that children who have visual impairments are seen as commodities to be trained (Sinclair-Taylor, 2000) in order to become 'seeing' adults who academically compete amongst their sighted peers. We see this approach of matching to sighted peers clearly in the areas of Maths, English and Information Technology, where the method of

assessment whether continual or by final exam, is the main concern of the educator and the rights and the needs of the child are not placed at the centre of the education provision.

The Curriculum

Part of the solution is to transmogrify the educator from adhering to the sophisticated deficit model to one that generates empowerment of the pupil. In order to succeed at this change several factors need to occur if we are to move from pupils with visual impairment leaving school with a high level of academic achievement but who are unable to go shopping, wash their clothes, or cook for themselves.

If people with visual impairment are to lead full and successful lives within a working day to day environment, they must be able to do so independently. This is the key. Pupils with visual impairment must develop their mobility skills first. Pupils with visual impairment need to have excellent independent living skills. This means pupils with visual impairment must learn to act as independent agents, as active agents where they control for themselves the environment and domain that surrounds them and not the other way around. A key component to ensuring this occurs is to have orientation and mobility skills delivered at school and at home within the community by qualified habilitation² instructors who are trained to work with children. Qualified teachers of the visually impaired (QTVI) are not fully skilled to deliver this. QTVIs can and do receive some training in sighted guide techniques, however it is not commensurate with fully qualified Orientation and Mobility Instructors. Students who receive mobility and orientation instruction are more likely to be employable, have higher levels of independence, have the skills necessary to utilise a variety of transport options, and are not limited to “getting a taxi” (Carey, 2006).

Difficulties arise with this solution over the time when the instruction of these skills occurs. Is the pupil, for example, expected to miss classes of core subjects to receive mobility training? More importantly instruction also needs to take place at home, and between home and school. The rhetoric of the “community school” is entrenched within policy and ideology, yet when it comes to orientation and mobility training for the child with visual impairment this rhetoric often gets ignored. These issues must be overcome if we are to take seriously the aim of active citizenship.

One way of achieving this, for some pupils, especially those who should be accessing independent living skills instruction, is to focus less on academic attainment and concentrate mainly or even wholly on developing independent living skills. Academic attainment may be achieved later, as it does for many young sighted adults. If this suggestion is accepted in schools, then the training of independent living skills must be supported by appropriately trained habilitation workers, employed by local education authorities, and then supported by social work habilitation workers during out of term time. This mixed model of collaborative, multi-agency delivery ensures that all aspects of daily

² Notice the term is habilitation instructors and not rehabilitation instructors. Children with visual impairment do not need to be re-habilitated, in their orientation, mobility and daily living skills.

living and mobility needs are catered for, not only at school but within the community as well.

A theme that frequently emerges from the literature is the requirement for collaborative services to meet the needs of children with visual impairment. This is never more needed than when we consider transition from school into further or higher education or employment. The Facilitating Inclusive Education and Supporting the Transition Agenda (FIESTA) Best Practice report (Davis and Ravenscroft *et al*, 2014) highlights nine important areas that professionals and parents and children should focus on through this important transition period. These nine areas are briefly summarised below in Table 1 and show how in order for successful collaborative working to occur an inclusive and informed approach for all involved is necessary.

1. Formal Transition Framework	Professionals with Parents need to develop a formal transition framework which is flexible to the individual needs of children with visual impairment and adaptable based on national policies. A framework that details pre-transition preparations and post transition evaluation to ensure successful transition and meaningful inclusion.
2. Holistic Approach	Recognise the educational, psychological, social and cultural contexts of a child with visual impairment and their families which will provide a holistic approach to learning and remove barriers for learning.
3. Participation	Ensure children with visual impairment and their parents are involved and are at the centre of all decisions that affect them.
4. Tailor Made	Facilitate children with visual impairment through bespoke approaches and pedagogy tailored to their individual requirements.
5. Information	Provide relevant, up to date, timely information to children with visual impairments and their parents in an accessible manner.
6. Key Worker	The key worker (point of contact) is an essential role for all professionals to liaise with and communicate with ensuring a clear pathway of communication for all. Formalise a key working system for children with visual impairments and their parents to support them throughout the transition process.
7. Continuation of Supports	Identify a clear pathway for the continuation of support for children with visual impairment during and subsequent to transition.
8. Collaborative Working	Ensure professionals in education, health and social work collaborate using a pro-active approach to meet the needs of children with visual impairment.
9. Training	Provide training and continuous professional development for professionals that centre on managing transition, adapting the curriculum, models of inclusion, disability and childhood.

Table 1: Nine step process to support transition process of children with visual impairment. (Davis, Ravenscroft *et al*, 2014).

The lack of engagement of young people in the transition process (point 3, 4, & 5 from Table 1) has also been reported by Hewett, Douglas and Keil (2014) where 47 participants with visual impairments were interviewed as they made their transition from compulsory education into further, higher and employment. It appears that many students did not engage with the more formal pre-transitional preparation process of the transition review although most participants did report that overall they felt supported and prepared. It certainly seems important that whatever process of transition the child with visual impairment is entering, whether it is from early years pre-school setting to primary, from primary to secondary and from secondary onwards, they are involved in the process and considered active agents in that their comments and their wishes should be taken seriously.

In order to achieve this it is essential that parents, educationalists and other professionals work closely together to determine the successful delivery of an appropriate, planned education that enables the child with visual impairment to thrive at school (Townsley, Abott, and Watson, 2004). The driving force of having this approach is the belief that the co-ordination of services will avoid duplication of effort and provide children and families with better outcomes. Atkinson, Jones and Lemont (2007) identified several positive outcomes for those that have adopted a multi-agency approach. These outcomes include access to services not previously available to children and families, improved educational attainment for children within mainstream schools and a reduced need for more specialist services. Integrated service provision also leads to significant benefits for those staff and services that are part of a multi-agency framework (Gray, 2008).

However, in order to plan and develop successful integrated services, well-trained and competent professionals need to acquire an accurate demographic profile detailing numbers of VI children who will require support. Yet in the United Kingdom there is still no accurate record of how many children and young adults there are who have a significant visual impairment. This places policy makers and managers charged with the forward planning of integrated service provision with the difficult task of delivering services based on information that may not describe the full scale or spectrum of children needing support. Perhaps a simple analogy would help to express the concerns being issued here. By not having accurate details on the numbers (and potential numbers) of users of services such as education, health and social work, is surely like an architect planning a large public building, but not knowing how many people will go into it, or consequently what the internal and external requirements should be.

Certification and Registration of People including Children who are Visually Impaired

In the United Kingdom the current certification system is when a Consultant Ophthalmologist can certify that a person is either severely sight impaired (blind) or sight impaired (partially sighted) and is eligible to be placed on a register, usually held by either a Blind Welfare Society or Local Authority Social Work department. Only a Consultant Ophthalmologist can certify that a person is either blind or partially sighted; however, there are pathways of referrals from either the eye clinic, or the Optometrist directly to social

services which alert them to the needs of people with visual impairments in advance of certification (Durnian, Cheeseman, Kumar *et al*, 2010).

There are many problems with the current registration system; the main one being under registration. There is a growing body of evidence which suggests that data from the register(s) is unreliable (Barry and Murray, 2005) and particularly so for children (Clunies-Ross and Franklin, 1997; King, Reddy, Thompson *et al*, 2000; Ravenscroft, Blaikie, MacEwen *et al*, 2008). Possible explanations for this under registration of children may include a lack of awareness that children and parents have about the process of certification and registration and the people who may provide their support. It is also not compulsory and some children and adults may already be in receipt of any benefits they are entitled to. There could also exist a communication gap, perceived or real, between social, educational and health care staff; for it has been claimed that there is a lack of awareness from staff in schools and local authority education/children and family departments about the process of certification and registration (Scottish Executive, Report of the Certification and Registration Working Group, 2001; Alexander, Rahi & Hingorani, 2009). Despite the failings of the registration system, local authority services still refer to the register and use it as a guide to anticipate the expected number of VI children that may need support and to initiate funding and implement strategic processes.

Clinical Assessment of People with Visual Impairments

Before we examine the profile of children with visual impairments we need to ascertain what exactly we mean by visual impairment and how it is measured. We measure how well a person sees by measuring visual acuity. The term 'visual acuity' was introduced by Donders (1862) to describe 'sharpness' of vision, although nowadays it is the ability to resolve fine detail and, specifically, to read small high contrast letters. Visual acuity is therefore the best direct vision that can be obtained, with appropriate spectacle correction if necessary, with each eye separately, or with both eyes (Thomson, 2005).

In a formal clinical setting the standard measure of visual acuity is usually assessed through the 'Snellen' notation. The 'Snellen acuity' uses letter recognition on a Snellen Vision Chart as shown in the left chart of figure 1. If another test is used to measure acuity it will often have a Snellen equivalent since this is most easily interpreted vision scoring method.



Snellen Chart



Bailey Lovie, LogMAR Chart

Figure 1. A comparison of the Snellen and LogMAR charts.

A Snellen vision score is derived from the number of letters correctly identified on a Snellen vision chart from a recommended testing distance of 6 metres (6 metres in UK or 20 feet in USA). The Snellen score is found by recording the smallest size of letter that can be correctly identified and is recorded as a fraction. For example, if only the top letter of a standard Snellen chart is correctly identified the resultant Snellen score will be 6/60. The numerator (6) corresponds to the testing distance, whilst the denominator (60) equates to the size of the letter. The value 6/60 indicates that a person can correctly identify a letter at 6 metres, which a person with normal vision would be able to identify at distance of 60 metres. A 6/60 value indicates poor vision. In contrast, a score of 6/6, would denote a vision within normal/average range since the letter is correctly identified at 6 metres.

The Snellen chart, although it is universally accepted, does have its flaws (McGraw, Winn, & Whitaker, 1995). For example, the limited number of letters at the top of the chart does put people with very poor visual acuity at a disadvantage compared to those with better acuity. There is also the problem of irregular progression of letter sizes within the Snellen chart. The jump in difference between the letters representing acuities of 6/5 to 6/6 is an increase of 120% where as the difference from 6/36 to 6/60 is 167%. As Thomson (2005, p57) states “*this is analogous to a ruler which is marked with different length graduations*”.

Bailey Lovie (1976) charts, which negated some of the disadvantages of the Snellen chart, are now being introduced. The Bailey Lovie charts (see figure 1) convert a geometric sequence of letter sizes to a linear scale, and give a LogMAR notation of vision loss. LogMAR vision testing offers a consistent and scientific method of recording vision scores. Although LogMAR is seen as the gold standard in measuring visual acuity it is still common parlance to use the Snellen notation, and to convert it using a similar table as found in table 2. However due to the reasons just explained these conversions are only approximate and good practice dictates that comparisons between LogMAR and Snellen should not be made.

LogMAR	Snellen equivalent
0.0	6/6
0.3	6/12
0.5	6/18
0.6	6/24
0.8	6/36
0.9	6/48
1.0	6/60
1.1	6/72
1.3	6/120
1.5	6/180
1.8	6/360

Table 2. LogMAR to Snellen conversion.

Definition of Visual Impairment

We can now consider the term ‘visual impairment and certification’ as it relates particularly to children and young adults. In the UK it is the National Assistance Act 1948 that defines ‘blindness’ for certification. The act states that a person can be certified as severely sight impaired if they are “*so blind as to be as to be unable to perform any work for which eye sight is essential*” (National Assistance Act Section 64(1)). In this definition the language of certification and registration is closely related to the adult world and clearly has no relevance at all to children. Nowadays, the explanatory notes issued to Consultant Ophthalmologists and Hospital Eye Clinic Staff from the United Kingdom’s Royal College of Ophthalmologists (Levy, 2007), are used and define three distinct levels of certification for severely sight impaired people. The first of these are for people who may be regarded as blind³ who have an acuity score of less than 3/60 Snellen. The second group are those that have an acuity of 3/60 but are less than 6/60 Snellen⁴. The remaining severely sight

³ Note that some vision may still remain.

⁴ This group of people will also be classed as blind if their visual field is contracted. The visual field is the portion of the subject's surroundings that can be seen at any one time. (Wilson, F.M.(2005). Practical Ophthalmology (5th ed.), American Academy of Ophthalmology).

impaired people are those that have a visual acuity of 6/60 or better, who would not normally be regarded as being blind, but are certified (blind) if the field of vision is considerably contracted, especially in the lower part of the visual field.

For those children and adults who are partially sighted there is no legal definition and so there are only guidelines which indicate that a person should be certified as sight impaired if they have a visual acuity of 3/60 to 6/60 Snellen and a full visual field. Or up to 6/24 Snellen with a moderate contraction of the visual field, or even 6/18 Snellen if there is a gross visual field deficit. Generally, it is likely that a child will receive intervention from a qualified teacher of visual impairment (QTVI) in the United Kingdom if the child's visual acuity is less than 6/18, or if the child has very good acuity but has a significant reduction of visual field or if the child has cerebral visual impairment. The child's use of vision will be monitored by a multi-agency team if the congenital eye condition is likely to deteriorate.

Functional Vision Assessments

It is important to recognise the distinction between measurements of visual acuity for a clinical measure which can be part of a diagnostic assessment or is enveloped within a treatment regime and measurements of visual acuity/function within a functional assessment. Clinical measures are measures of visual function which depend on the status of ocular, refractive and ocular-motor systems as well as the visual pathway (Hansen & Fulton, 2005). The purpose of functional assessments should be to obtain information which can be used to gain an understanding of the impact of visual impairment and the use of vision in everyday activities for the individual and to observe ways in which the person's remaining vision is used or could be used in a variety of real-life environments.

Children do not develop and learn how to acquire skills and concepts in isolation, for example we do not see play, socialisation, language and cognition all developing in isolation from each other. What we do see is a complex interweaving of cognition, mobility and orientation, language, emotional and social integration skills, in which functional vision impacts. Deficit models of assessment, those that are commonly found within a medical context tend not to unwrap this complex weave, nor do isolated tests within functional assessments achieve any better results. There is a requirement therefore to move from this deficit stance if we are to move towards more appropriate assessments for the child with visual impairments; assessment that is encapsulated within a strength based paradigm, a paradigm that sees the child holistically, and one which emphasises the capabilities or the positive aspects of the child's vision.

Functional vision assessments are therefore best achieved through a multi-agency approach, but the multi-agency team must take into account their own constructions of the child they are assessing for we can learn from those theorists such as Woodhead and Faulkner (2000) which see concepts of childhood as being created. In other words, we need to be careful that functional assessment teams, where the assessment tools are being guided by this construction, do not measure a child's functional vision within a pre-conceived framework of that child. The framework could contain issues of class, gender,

race and even parental expectations. Teams need to examine the appropriateness of the functional assessment tools they use to assess a child's vision, for it is the assessment tools that will in part shape that child's life and determine future support and need.

The Profile of Children with Visual Impairment

In the last two decades there have been various attempts at determining the numbers and profile of VI children living in the United Kingdom (see Evans, 1995; Rodgers, 1996; Foster and Gilbert, 1997; Rahi and Dezateaux, 1998; Keil and Clunies-Ross, 2003; Rahi and Cable, 2003; Bodeau-Livinec, Surman, Kaminski *et al*, 2007; Ravenscroft *et al*, 2008). In 2003 The Royal National Institute of Blind People (RNIB) estimated that there were 23,680 children and young people known to Visual Impairment Services across England, Scotland and Wales (Keil & Clunies-Ross, 2003). This figure can be compared with the number of children who are officially registered blind or partially sighted in 2005 across England, Wales and Scotland. This number of 11,514 clearly shows the under-registration of children on local authority registers. Nevertheless, in 2007, RNIB commissioned another study developed by Morris and Smith (2008) and found, by sending questionnaires to local authorities in England, Wales, and Scotland, 16,008 children were receiving support from their local authority due to their visual impairment. Morris and Smith claim their data only represents 66% of children with visual impairment educated in England, and 34% of children in Scotland and 80% of children educated in Wales. Consequently, Morris and Smith suggest the original figure of sixteen thousand (with some caveats) should be extrapolated using data from the 2006 census to 25,305. However, in 2014 RNIB reported an estimate of 40,000 children and young people (CYP) aged up to 25 years with VI who require specialist support and approximately 25,000 are under 16 years old (RNIB, 2014). Therefore, to date, it seems that the accurate figure is still unknown.

One way of determining the number is perhaps not to do a 'count' of how many children there are who are visually impaired but to look at the incidence and prevalence of visual impairment. Two influential studies (Bodeau-Livinec, Surman, Kaminski *et al*, 2007 and Rahi and Cable, 2003) which examined the rates of VI and blind children within the UK population, reported lower results. Children with a corrected visual acuity of 6/18 to 6/60 in the better eye were defined as having visual impairment and children with corrected visual acuity in the better eye of less than 6/60 or no useful vision are defined as having severe visual impairment or were blind. Bodeau-Livinec and her colleagues suggest that 13 in every 10,000 children born in the UK will be diagnosed with a visual impairment by their 12th birthday which amounts to around 950 new cases a year (p1101). They also found a cumulative incidence rate of 5.8 per 10,000 at 5 years of age for children that were severely VI or blind, which supports Rahi and Cable's (2003) finding of 5.3 per 10,000.

Ravenscroft *et al* (2008) using data from the Visual Impairment Scotland (VIS) notification database found the most single cause of childhood visual impairment was not due to damage of the eyes but due to damage to parts of the brain that are responsible for seeing. The study claims that over half (51%) of the 850 children notified at time of analysis, visual impairment was due to some form of damage to the brain or visual pathways, exactly the

same percentage as Bodeau-Livinec et al (2007). There were a total of 75 different conditions named by eye health professionals as the primary cause of visual impairment in the children listed on the VIS database. However, on closer analysis of the children on the database, 18% of all children had Cerebral Visual Impairment (CVI) as the most identified single primary diagnosis given by the child's ophthalmologist. Albinism with 9% was a distant second. Given damage to the brain is a major factor responsible for a child's visual impairment, it is of no surprise that the study found the majority (71%) of children with visual impairment also had some additional disabilities (in addition to their visual impairment).

The majority of children on the VIS dataset, who were able to be examined, either clinically or functionally, fell within the 6/18 to 6/60 visual acuity range. This highlights the fact that very severe loss of sight or blindness is of very low incidence in children, indicating the term 'blind' is quite misleading, for most children with visual impairment have some vision. Again this comes back to the notion of constructions we make about children. More often than not the 'blind' child can be a seeing child. It is important mainstream classroom teachers and qualified teachers of visually impaired children (QTVI) utilise what vision the child has and, for most cases (except those where the child has no light perception at all), supports the child as a 'seeing' child rather than as 'blind'.

Support for the classroom teacher is available from many sources but one of the most fundamental sources of support will be from the QTVI. One of the main roles of the QTVI is to empower others, by collaborating and consulting with the classroom teacher and others, and to provide awareness raising that will inform them about the implications a visual impairment may have. Importantly though the concept of empowerment goes beyond mere awareness raising in order to change the behavior and assumptions that surround the pupil with visual impairment. Clearly stated, awareness raising, although necessary, is simply not sufficient. Awareness raising for staff and pupils is a one-way process, placing little responsibility on the recipient for they are passive receptors of the information given to them by QTVIs. Mainstream teachers need to be empowered to change their practice. As Coburn (2001), and more recently supported by Printy (2008), suggests, teachers change their practice dramatically as a result of interaction with individuals that are out with their own 'community of practice'. If this is the case the importance of the role of the QTVI in empowering the actions of the mainstream teacher cannot be underestimated.

The responsibility of changing behaviours must not lie only with the QTVI. Stein and Nelson (2003) argue that "teachers must believe that serious engagement in their own learning is part and parcel of what it means to be professional and they must expect to be held accountable for continuously improving instructional practice" (p425). Empowerment in this context then is a two-way relationship between the QTVI and the mainstream teacher in that the QTVI must set the right enabling conditions for empowerment to occur, through dialogue and consultation. However, mainstream teachers themselves, through self-agency, must take hold of these conditions and deliver change themselves.

Research tells us that having a special health care need generally is associated with being bullied (van Cleave and Davis, 2006). Sweeting and West (2001) found increased bullying was more likely "among children who were less physically attractive, overweight, had a

disability such as a sight, hearing or speech problem” (p225). Pupils with visual impairment appear to use the concept of friendship to protect themselves against bullying (Buultjens, Stead, and Dallas, 2001) and professionals need to beware of the exact status and nature of friendship amongst pupils with visual impairment. Roe (2008), developing Buultjen’s stance, defines the issue clearly in that professionals need to create a variety of social contexts to promote social inclusion. In each of these contexts the child should not be seen as one with difficulties but an examination of how each of these created contexts impact on the child with visual impairment. Roe is almost right. However, in order to have a positive impact on learning, mainstream teachers need to feel empowered to be able to create the right contexts, and empowerment again comes in part from discourse with the QTVI and other professional colleagues.

Empowerment from Orientation and Mobility

Empowerment is essential; however children must develop their mobility skills so that they are able to move around confidently in his surrounding environment. Orientation and Mobility skills should be delivered by qualified habilitation⁵ instructors who are trained to work with children. It is not enough to have instructors who are trained to work with adults, who then suddenly find themselves working with children; the child is not a ‘little adult’. Nor are QTVIs qualified to plan and deliver these skills either. QTVIs do receive some training in sighted guide techniques but it is not commensurate with fully qualified Orientation and Mobility Instructors. Pupils with visual impairment who receive mobility and orientation instruction are more likely to be employable, have higher levels of independence, and have the skills necessary to utilise a variety of transport options, that are not limited to “getting a taxi” (Carey 2006). However, conflict can arise within the school environment. There are issues of when the instruction is going to take place within the school timetable: Is the pupil, for example, expected to miss classes of core subjects to receive mobility training? Importantly, instruction also needs to take place at home, and between home and school. The rhetoric of the “community school” is entrenched within policy and ideology, yet when it comes to orientation and mobility training for the VI child this rhetoric often gets ignored.

⁵ Notice the term is habilitation instructors and not rehabilitation instructors. Children with visual impairment do not need to be re-habilitated, in their orientation, mobility and daily living skills.

Conclusion and recommendations

If the trend to include pupils who are VI within mainstream continues then there is a need to think very strongly about the relationship between academic attainment and independent living skills. With the introduction of Curriculum for Excellence, the time is right to redress the balance, to take a brave step forward and focus on ensuring that children who are blind or partially sighted can function independently, to the best of their ability, in a sighted world and not, as at present, have some children who attain excellent grades but cannot engage with the world around them.

Educationalists should be moving towards holistic education programmes and by doing so we may find that educators and professionals are recognising the difference between each child; identifying exactly each and everyone's own particular need and, consequently, best supporting the child through school and into early adult years (Ravenscroft, 2013).

All mainstream class teachers need to take ownership of all pupils in their classes, including those with a sensory impairment and work in partnership with teachers of sensory impairments for advice, support, implementing recommendations, etc, in order to raise attainment.

The pupil voice is very important (the visible learner) – what does the learner feel that they need? how do they feel about the teaching they receive? and, what strategies and inputs work for them? Giving the pupil ownership of their learning, and not having things 'done for them' or an adult next to them at all times, is important in terms of motivating them to be successful learners.

Mobile technology such as iPads are successful for learners with visual impairment and can help to raise attainment for the following reasons: allows the pupil to have lightweight, portable inclusive technology which they will use; textbooks and work can be downloaded from *Books For All* or *Load2Learn* or electronic work can be sent to the iPad and accessed with the accessibility features of speech, zoom, etc, at the same time as everyone else; the pupil can access a mirrored image of the Promethean Board on their iPad at the same time as everyone else. It also cuts down on the amount of paper that the pupil needs to carry about/handle which can be unwieldy and unmanageable.

A Scottish Sensory Collaborative (akin to the EYC but for all ages) may be a good model of improvement to help raise attainment. Local authorities could work in partnership with others and share 'tests of change' and mirror successful practice where appropriate.

Early Intervention for laying critical skills, eg, mobility, self-help skills, social help with inclusion, being part of the class, must impact on how pupils feel about themselves and their learning.

There requires to be clarity and accuracy in figures regarding population – current figures are unsound. The SSC recommends the Scottish Government and NHS Scotland to fully support the newly developed Visual Impairment Network for Children and Young People (VINCYP) as they will be able to produce reliable figures in the coming years.

The SSC also follows VINCYP recommendations that each Health Board and eye department should follow the VINCYP pathway to allow access to services promptly and each area should ensure that there is an early intervention professional specifically trained to rapidly provide quality input to children with visual impairment their families.

References

References for this document can be made available on request.